# Copper and Copper Alloys DEF STAN 02-835 ~ NES835



#### **SPECIFICATIONS**

NES835 DEF STAN 835 Commercial

A Copper/Nickel Alloy with very high strength and very high corrosion resistance especially in sewater and marine enviroments. Also very good resistance to galling. Mainly used in Naval Engineering, Aerospace and Defence Applications.

## CHEMICAL COMPOSITION

DEFSTAN 02-835/2(2011) Rod and Forgings	
Element	% Present
Nickel (Ni)	13.5 - 16.5
Manganese (Mn)	3.5 - 5.5
Aluminium (Al)	1 - 2
Iron (Fe)	0.7 - 1.2
Chromium (Cr)	0.5 max
Zinc (Zn)	0.2 max
Silicon (Si)	0.15 max
Sulphur (S)	0.15 max
Tin (Sn)	0.1 max
Carbon (C)	0.05 max
Magnesium (Mg)	0.05 max
Lead (Pb)	0.02 max
Phosphorous (P)	0.01 max
Copper (Cu)	Balance

### **ALLOY DESIGNATIONS**

**DEF STAN 02-835** NES835 **NES 835** DEF STAN 835

#### **TEMPER TYPES**

FORGED AND HEAT TREATED

#### SUPPLIED FORMS

Bar Grades 1 and 2 Forgings Class 1, 2, 3

- Bar
- Rod
- Forgings

#### **MECHANICAL PROPERTIES**

DEFSTAN 02-835/2(2011) Rod Up to 125mm	
Property	Value
Proof Stress	430 Min MPa
Tensile Strength	725 Min MPa
Elongation A50 mm	18 Min %

DEFSTAN 02-835/2( Forgings Up to 125mm	
Property	Value
Proof Stress	400 Min MPa
Tensile Strength	725 Min MPa
Elongation A50 mm	18 Min %



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#### **REVISION HISTORY**

Datasheet Updated 18 July 2019

### **DISCLAIMER**

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

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